

SHORTIA
NEWSLETTER OF THE
WESTERN CAROLINA BOTANICAL CLUB



Shortia galacifolia

Oconee Bells

Spring 2023

Board of Directors

President	Joe Standaert
Vice-President	Cindy Carpenter
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MEMBER NEWS

Field Trip Cancellations: Occasionally, field trips must be canceled or changed either for weather conditions or other reasons such as road closings. Such changes are sent out by email to all members by 7 AM the day of the field trip. If you do not have email access, please call the leader, co-leader, or recorder (whose phone numbers are listed on the schedule) to be sure that the walk is going to go as planned. Indoor programs are canceled when Henderson County Schools are closed (see <http://www.hendersoncountypublicschoolsnc.org>) but NOT necessarily canceled because of the delayed opening.

For any change of address, email or telephone number, please send an email to wcbotanicalclub@gmail.com.

Our webpage is located at <http://wcbotanicalclub.org>

REMINDER: Don't forget it's dues time. Make \$15 check payable to Western Carolina Botanical Club and mail to Western Carolina Botanical Club, 232 Frazier Road, Brevard, NC 28712.

President's Message

Joe Standaert

It is the start of the Club's 51st Year !

We had our 50th Anniversary celebration on March 24th at Bullington with a large and enthusiastic group of 50 "botanizers". And now that we are starting our new outdoor season, as of this writing, we have already had two great outdoor walks to enjoy the beauty of the mountains in springtime. Our walk to Oconee Station Cove Falls was great, with three notable species. I saw *Viola tripartita* (Three-parted Violet) for the first time in 13 years or since my first trip there in 2010. We also saw the fairly uncommon *Collinsonia verticillata* (Whorled Horsebalm) and flowering *Rhododendron periclymenoides* (Pinxter Flower). The new season also led us to a new field site in Tryon, the Vaughn Creek Greenway. After a winter of indoor activities, it is a welcome change to again head out into the woods.

The 50th Anniversary celebration was a very enjoyable social event with lots of memories, good companionship, great guest speaker, a musical interlude and, lastly, a tasty lunch complete with a birthday cake! Our guest speaker was Gary Kauffman, who has been the botanist / ecologist program manager for the National Forests in North Carolina since April of 2007. His topic was "Twenty-five Years of Botany in the National Forests in North Carolina" with an emphasis on presenting many of the rare and threatened species in our area. We had our own Cindy Carpenter entertain us with her version of Gillian Welch and David Rawlings's "Acony Bell", which will, I am sure, go viral on YouTube ! The club had display tables of old and antique field and nature guides, displays of club memorabilia and scrapbooks and a display of botanical books written by club members over the years. A handout was distributed which documented 50 years of club highlights, including Bullington activities. There was also a time of reminiscences by Bonnia Arbuckle, Betty Jones, Juanita Lambert and Ken Borgfeldt. Lunch was supplied by the club and featured a "birthday" cake, complete with Dick Smith's Oconee Bells drawing. Lunch was coordinated by Mary and Joe Standaert and several willing helpers.

If you missed the festivities and would like to see copies of the program brochure and highlight documents, they are available on the club website here: <https://wcbotanicalclub.org/history-of-the-club/>.

If you would like to see Cindy's song rendition, some recalled memories by our club members and a video compiled by Ken Borgfeldt showing our club members on our walks over the last 30 years, see here: <https://wcbotanicalclub.org/2023/03/26/wcbc-50th-anniversary-celebration-march-24-2023/>

WCBC 50th Anniversary Celebration



A Year's Botanizing on the Frying Pan Trail

Daudie & John Colson, Penny Longhurst, and Aleta Tisdale

After a rewarding field trip on Frying Pan trail in July 2021, we decided that we would like to lead walks there monthly. One of our goals was to try to work out when to catch the native Azaleas blooming. We scheduled walks for around the second Monday of each month, between April and October 2022. The highlights of our visits are below:

At our first walk on April 11th, we had 8 participants. It was a beautiful sunny day, and we could see for miles because there were no leaves on any of the trees! We walked a loop returning to the Frying Pan trailhead from the Pisgah Inn along the Blue Ridge Parkway. We identified 60 species, 10 of which were blooming.

Noteworthy blooming plants were a huge Trailing Arbutus (*Epigaea repens*) and American Hazelnut (*Corylus americana*). We were surprised at the great number of Fly Poison (*Amianthium muscotoxicum*) plants already coming up as well as May Apples (*Podophyllum peltatum*) which we didn't remember previously seeing, probably because they are usually hidden under other vegetation later in the year. However, we decided that later in April might have been a better time to visit to see more flowering plants.

<https://wcbotanicalclub.org/2022/04/14/frying-pan-gap-loop-april-11-2022/>

For our second walk on May 16th, we had an increase in our numbers to 9 participants! The weather was cool and cloudy with no wind, a perfect day for botanizing. Once again, we walked the loop, returning to our cars along the Parkway. Plants had grown fast since our first visit. We identified 125 species, 51 in bloom. We couldn't find the May Apples, even though we knew exactly where to look! Noteworthy blooming plants included Striped Maple (*Acer pensylvanicum*), Wild Sarsaparilla (*Aralia nudicaulis*), Wild Lily-of-the-Valley (*Convallaria majalis* var. *montana*), masses of Hawthorns (*Crataegus* sp.), Umbrella Leaf (*Diphylleia cymosa*), Mountain Fetterbush (*Eubotrys recurva*), American Lovage (*Ligusticum canadense*), Pin Cherry (*Prunus pensylvanica*), Carolina Azalea (*Rhododendron minus* var. *minus*), Red-berried Elder (*Sambucus racemosa*), Rose Twisted Stalk (*Streptopus lanceolatus* v. *roseus*), Purple Wake Robin Trillium (*Trillium erectum*), and loads of Painted Trillium (*Trillium undulatum*). If you like Trillium and these early spring flowers, this would be a great time to visit. <https://wcbotanicalclub.org/2022/05/22/frying-pan-gap-loop-may-16-2022/>

For our third visit on June 13th, we had 7 participants. Because the weather was very hot and sunny, we didn't walk the loop back on the road. Nonetheless, we identified 110 species with 48 in bloom. This was a perfect time for seeing the Azaleas in bloom, although maybe one week later we would have seen more of the Clammy Azalea (*Rhododendron viscosum*) flowering. Sadly, an over energetic weed-whacker had cleared plants and shrubs (including Azaleas) along the trail for several feet on each side. The debris was then discarded on top of other plants. Noteworthy plants in bloom included Northern Leatherflower (*Clematis viorna*), Alternate-leaved Dogwood (*Cornus alternifolia*), Mountain Holly (*Ilex montana*), Mountain Laurel (*Kalmia latifolia*), American Lovage (*Ligusticum canadense*), Gray Beardtongue (*Penstemon canescens*), Smooth Azalea (*Rhododendron arboreascens*), our favorite huge Flame Azalea (*Rhododendron calendulaceum*), Clammy Locust (*Robinia viscosa*), Greenbrier (*Smilax rotundifolia*), Tassel Rue (*Trautvetteria caroliniensis*), Southern Mountain Cranberry (*Vaccinium erythrocarpum*), Deerberry (*Vaccinium stamineum*), and Wild Raisin (*Viburnum nudum* var. *cassinoides*). The Wild Sarsaparilla (*Aralia nudicaulis*), Beaked

Hazelnut (*Corylus cornuta*), and Red-berried Elder (*Sambucus racemosa*) were now in fruit.

<https://wcbotanicalclub.org/2022/06/16/frying-pan-gap-june-13-2022/>

For our fourth walk on July 18th, we had 7 participants and identified 87 species with 34 in bloom. Turk's Cap Lilies (*Lilium superbum*) were finally flowering! Many of the plants we had seen in the spring were now in fruit. Noteworthy blooming plants included Spreading Dogbane (*Apocynum androsaemifolium*), American Chestnut (*Castanea dentata*), Northern Leatherflower (*Clematis viorna*), Common Evening Primrose (*Oenothera biennis*), Black-eyed Susan (*Rudbeckia hirta*), Fire Pink (*Silene virginica*), Broadtooth Hedge Nettle (*Stachys latidens*), and Featherbells (*Stenanthium gramineum*).

<https://wcbotanicalclub.org/2022/07/24/frying-pan-gap-trail-july-18-2022/>

On August 8th, 6 of us walked one-way to the Pisgah Inn. Sunflowers were abundant. We identified 129 species with 53 in bloom. Noteworthy blooming plants included White Snakeroot (*Ageratina altissima*), Wild Basil (*Clinopodium vulgare*), Southern Harebell (*Campanula divaricata*), Flat-topped White Aster (*Doellingeria umbellata*), Fringed Loosestrife (*Lysimachia ciliata*), Whorled Wood Aster (*Oclemena acuminata*), Starry Campion (*Silene stellata*), Fire Pink (*Silene virginica*), Heart-leaved Aster (*Symphyotrichum cordifolium*), and Wavy-leaved Aster (*Symphyotrichum undulatum*). American Mountain Ash (*Sorbus americana*) and Wild Raisin (*Viburnum nudum var. cassinoides*) were in fruit. We were happy to see that the American Chestnut we had seen blooming in July also had fruit.

<https://wcbotanicalclub.org/2022/08/12/frying-pan-gap-trail-august-8-2022/>

September 12th was a glorious day, and 6 of us walked the loop. Asters were abundant. We identified 139 species with 52 in bloom. We were excited to see Showy Gentian (*Gentiana decora*), Ladies Tresses (*Spiranthes sp.*), and Large-leaved Aster (*Eurybia macrophylla*) blooming. Other noteworthy blooming plants included Flat-topped White Aster (*Doellingeria umbellata*), Whorled Wood Aster (*Oclemena acuminata*), Heart-leaved Aster (*Symphyotrichum cordifolium*), Bushy Aster (*Symphyotrichum dumosum*), Purple-stemmed Aster (*Symphyotrichum puniceum*), Wavy-leaved Aster (*Symphyotrichum undulatum*), and Arrow-leaved Aster (*Symphyotrichum urophyllum*). The American Chestnut, Mountain Holly (*Ilex montana*), and Carrion Flower (*Smilax herbacea*) had fruit. <https://wcbotanicalclub.org/2022/09/15/frying-pan-gap-trail-september-12-2022/>

On our final trip on October 7th, 6 of us walked the loop. It was warm and sunny and the fall colors along the Parkway were beautiful. We identified 141 species and 33 in bloom. Most of the plants we had seen earlier in the year were now in fruit, but noteworthy plants still blooming included Showy Gentian (*Gentiana decora*), Ladies Tresses (*Spiranthes sp.*), Large-leaved Aster (*Eurybia macrophylla*), Calico Aster (*Symphyotrichum lateriflorum*), White Heath Aster (*Symphyotrichum pilosum*), and Curtis' Aster (*Symphyotrichum retroflexum*).

<https://wcbotanicalclub.org/2022/10/09/frying-pan-gap-trail-october-7-2022/>

The leaders enjoyed the walks tremendously and were a little disappointed that more members didn't join us. Fortunately, we had almost perfect weather every time, although the June walk was very hot. We achieved our goal of seeing the Azaleas bloom and hopefully next year will be able to differentiate between the Smooth Azalea (*Rhododendron arborescens*) and Clammy Azalea (*Rhododendron viscosum*). In fact, we thought this was such a great idea that we decided to do monthly walks at Sam Knob Meadow in 2023. The first one will be on Monday May 8th. We hope to see you there.

Mountain Maple (*Acer spicatum*)



Missing Plants – Canada Lily (*Lilium canadense*)

Penny Longhurst

A few summers ago, I was hiking in Maine (to a waterfall, of course) when out of the corner of my eye I saw a tall plant with beautiful orange flowers. From a distance it looked a bit like a Turk's Cap Lily (*Lilium superbum*) but as I got closer, I saw that it was completely different, although clearly a Lily. I took many pictures and looking around the area found two immature plants. I didn't have a clue what they were. So later that day I sent pictures to club members asking for help in identifying this fantastic plant. Almost immediately Jim Poling responded that it was a Canada Lily (*Lilium canadense*). And he was correct! Thanks, Jim.

You may remember that several years ago, Ken started writing a column in Shortia named "Missing Plants", describing plants in our database that the club has never seen. Our database and plant list was originally created by including all the plants described in Dick Smith's book, *Wildflowers of the Southern Mountains*. However, Dick and Jeanne wandered far and wide looking for plants to include and the book covers mountains that stretch from Alabama all the way to Northern Virginia. Thus, many of the plants included have not been identified on our field trips. So far, Ken's still working on botanical names beginning with "A". Canada Lily is in our database, but the club has never recorded seeing it. Since it will be a while before Ken gets to "L", I'm going to write about this fantastic plant now and, who knows, you may get lucky and come across one on a field trip or while on vacation someday.

Lilium canadense was named by Linnaeus and illustrated by Mark Catesby in Appendix 2 of his "Natural history of Carolina, Florida and the Bahama Islands" published in 1747. Catesby states that he grew plants from seed obtained from Pennsylvania and that several flourished in Peter Collinson's garden in London (Horse Balm (*Collinsonia canadensis*) and Whorled Horsebalm (*Collinsonia verticillata*) are named after Peter Collinson).

Canada Lily is native to Eastern Canada and the USA. Weakley reports that it is common in the Northern Appalachian Mountains, but rare in the mountains of Georgia and the Carolinas, although Le Grand and co-authors show that plants have been collected in Henderson, Buncombe, and Jackson Counties.

Canada Lily is a tall plant, although maybe not quite as tall as Turk's Cap Lilies, reaching up to 5 feet. Like Turk's Cap and Gray's Lily, the leaves grow in whorls along the stem. The leaves of Gray's Lily are broader than those of Canada or Turk's Cap Lilies, while those of Turk's Cap appear longer and narrower than those of the Canada Lily.



Canada Lily (*Lilium canadense*)



Gray's Lily (*Lilium grayi*)



Turk's Cap Lily (*Lilium superbum*)

Canada Lily flowers are borne on multiple branches at the top of the stem. As you can see from the pictures below, there were 16 flower heads on my plant, 10 of which were open. The 6 buds hung down like those of Turk's Cap Lilies. Lily flowers lack sepals. Instead they have tepals, which are fused petals and sepals. Like Turk's Cap Lilies, the tepals of Canada Lilies can vary in color from pale orange to orangy-red. The color of the darkest red flowers is similar to that of Gray's Lilies. You can see some nice examples of red-flowering Canada Lilies at namethatplant.net. The tepals of Canada Lilies are retroflexed or bent backwards, unlike those of Turk's Cap which are strongly recurved or curved backwards. Tepals of Gray's Lily, in contrast, are spreading. The tepals of all three lilies are spotted on the inside surface. Like Turk's Cap Lilies, but different from Gray's Lilies, the anthers and pistils of Canada Lilies extend beyond the tepals.



Canada Lily (*Lilium canadense*)



Gray's Lily (*Lilium grayi*)



Turk's Cap Lily (*Lilium superbum*)

Sadly, our chances of spotting Canada Lilies in North Carolina look pretty slim. However, if you travel to New England keep your eyes peeled and you might just get lucky, like I was. It's a true bucket-list plant.

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What's in a Name – Part 2 – Scientific Names

Joe Standaert

When we are on our walks, there are always very interesting discussions about plant names, both scientific and common. I discussed common names in the last *Shortia*. This time I will discuss the confusions with scientific names and the various plant nomenclature databases.

We used to think common names were very variable but scientific names were static, but that is not the case anymore with all the new genetic and scientific research studies. Plants have changed genus names, have been assigned to new genus / species categories and have even been placed in new or different families. It is hard to keep up with the changes, especially when different organizations and authors are on different schedules and sometimes do not agree with the proposed changes. For example, some authors of vascular flora books try to publish nomenclature based on current research or proposed classifications, but the online database organizations may be slow to adapt or disagree with the proposed changes. The other issue is that botanists are sometimes designated as “lumpers” or “splitters”. That is, some scientists like to recognize variations in plants as different species or move them to sub-classifications of sub-species, variety, or even forms. Others just regard the differences as natural variations and “lump” a lot of the variants as just a single species.

So, what does our club do? As you know Ken Borgfeldt is our dedicated recorder and keeper of the club database. Betty Jones did that job for years and was responsible for computerizing all the old records and setting up the current database schemas. Years ago, the club decided to standardize on a single online reference source called ITIS, which stands for the “Integrated Taxonomic Information System” and can be found at <https://www.itis.gov/>. ITIS was formed over 25 years ago and its mission statement is stated as: “To communicate a comprehensive taxonomy of global species that enables biodiversity information to be discovered, indexed, and connected across all human endeavors. To achieve our mission, we partner with specialists from around the world to assemble scientific names and their taxonomic relationships and distribute that data through publicly available software. The result we seek is a complete, current, literature-referenced, and expert validated digital taxonomy that is open so it can be delivered and integrated into biological data management systems across the world.”

ITIS does not specify a single “accepted” common name, but rather lists a myriad of common names in use. Our club maintains the common names as originally from club member Dick Smith’s *Wildflowers of the Southern Mountains* and any subsequent name changes as they come up.

Other online databases are also available, but do not always agree with each other, based on timing of the updates and acceptance of new names. All of the databases have search features and some have the capability of downloading the information for anyone who would like electronic versions. ITIS, for example, will let you download the entire relational database structure which allows you to run your own queries and build your own customized database using SQL or MS Access. The major alternate databases are:

-- USDA PLANTS database: <https://plants.usda.gov/home>

PLANTS has a search capability, search by state, lists a single common name, and has download capability for partial lists by state, for example. It also lets you filter by native / introduced species.

-- BONAP (Biota of North America) database, John T. Kartesz: <http://www.bonap.org/>

The Taxonomic Data Center page lets you customize searches by family or species or geographic region. The North American Atlas page shows county level distribution maps of species

-- Not a database, but an online app and also downloadable as a full

Vascular Flora manual (Dr. Alan Weakley's Flora of the Southeastern United States):

Online app: <https://fsus.ncbg.unc.edu/>

Request downloadable full manual:

<https://ncbg.unc.edu/research/unc-herbarium/flora-request/>

Using the ITIS database makes available several tools and resources. The search capability quickly tells you if a given plant name is currently accepted (or not), all the known synonyms for that plant (accepted or not), the common names for the plant and other details. ITIS also provides a tool that lets you upload a list of scientific plant names and it will produce a report that indicates the current status of those names and any new names. The "taxmatch" tool is located at <https://www.itis.gov/taxmatch.html>. To use the tool, you simply upload an (ANSI format) text file of names and request the report. For example, I uploaded these five plant names: *Prenanthes altissima*, *Trillium simile*, *Saxifraga michauxii*, *Cardamine clematitis* and *Eupatorium maculatum* and received the following results: All were in the database, but it flagged two new accepted names: *Eutrochium maculatum* for Joe-Pye and *Micranthes petiolaris* for the Saxifrage. The tool does not handle common names, however.

Have fun!

Wild Gingers, Hexastylis and Asarum, in North Carolina

Jean Woods

The linked article was co-authored by one of our club members - Jean Woods. It contains useful information for identifying Wild Gingers.

<https://ncwildflower.org/wild-gingers-hexastylis-and-asarum-in-north-carolina/>

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SHORTIA

A quarterly publication of the Western Carolina Botanical Club
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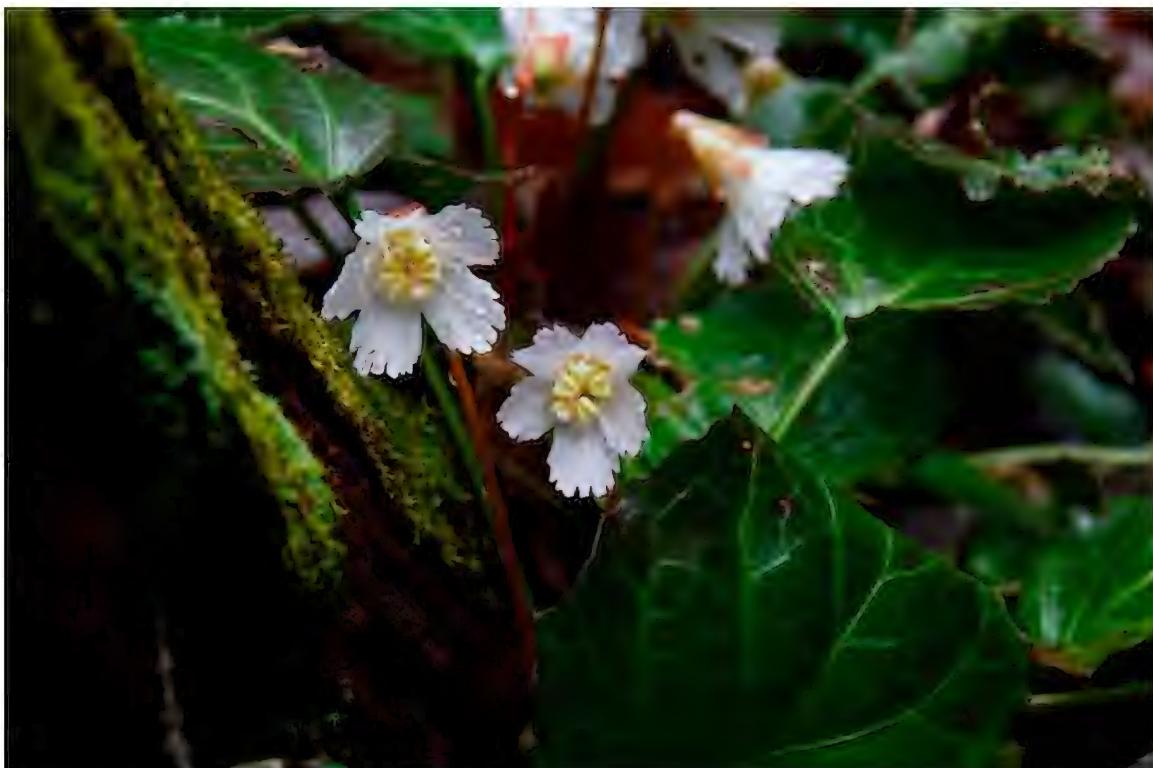
Vol. XXXV Vol. 1

Editor: Ken Borgfeldt

1Q 2023

The mission of the Club is to identify and study native plants and their habitats and to advocate the protection of biodiversity in our natural world. Membership is open to all. Individual/family memberships are \$15/year. Lifetime membership is \$150. Send [completed membership form](#) and dues to Western Carolina Botanical Club, 232 Frazier Road, Brevard, NC 28712

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President's Message

Joe Standaert

As you read this, I have now “retired” from my two-year “El Presidente” duties and have passed the baton to Cindy Carpenter. It has been fun for the past two years and the time has passed quickly. It has been enjoyable, educational and a pleasure to work with such a good group of willing volunteers! It has not been uneventful, however, as we had to weather COVID cancellations for both the indoor and outdoor programs and then gear back up to get our walks back in the field, sometimes with COVID restrictions. Mary Standaert re-started the Indoor programs this past winter with a new format of refreshments and social time and reduced the winter indoor meetings to twice per month. Penny continues to develop our excellent website and supply us with timely virtual walk photos. She even kept us occupied all this winter with a monumental project to post weekly plant photos by genus! We have a new scheduler thanks to Aleta Tisdale volunteering for that position. We also now have three new Board members: Rebecca Sewell, Carol McCall and Lynn Mosura-Bliss. So, the club continues into its 51st year!

My wife and I are excited about a recent new potential opportunity for the Club. I was contacted by Glenn Middleton, the Executive Director for the Friends of Pisgah View State Park (FPVSP), which is a non-profit co-founded to support NC's newest state park, Pisgah View State Park (PVSP). They would like us to potentially collaborate to help support the new State Park in Candler. I have suggested that we meet and discuss possibilities of doing botanical survey walks on the property and possibly even helping develop a Nature Trail, like the Buck Springs Trail, if they see that as a possibility. This opportunity would get us on the ground floor of a brand-new State Park and maybe help shape the outdoor experience for this new facility.

Missing Plants – Brook Saxifrage (*Boykinia aconitifolia*)

Penny Longhurst

Last June I was pottering around at the base of High Falls in DuPont State Recreational Forest looking for Azaleas when I noticed some Saxifrage blooming at the edge of the rocks. I went over to take pictures and realized that the leaves were not Saxifragy at all but looked more like Geranium or Tassel Rue (*Trautvetteria*) leaves. From the deep recesses of my mind, I seemed to recall an old email conversation that Lucy had with Joe about a Saxifrage-like plant she had seen downstream at Triple Falls, and the name *Boykinia* popped up. When I got home, I checked my books and several internet sites to see if my guess was correct, and it was. I found Brook Saxifrage (*Boykinia aconitifolia*). I visited the DuPont waterfalls last week and found Lucy's *Boykinia* population was still going strong, as was mine.

Strictly speaking, *Boykinia aconitifolia* is not a WCBC missing plant. The club has seen it twice before, at Pacolet Falls in April 2001 and at Highlands Botanical Garden in June 2003. However, that's over 20 years ago! A sighting is long overdue. I suppose that the plant might be misidentified if it were not blooming. However, the locations where it prefers to grow are not places that the club visits often.

The genus *Boykinia* was named by Thomas Nuttall in honor of Samuel E. Boykin, a physician and naturalist who lived in Milledgeville, Georgia. Boykin collected plant specimens for many eminent botanists, including Torrey and Gray. In 1834 Nuttall examined unidentified herbarium specimens at the Academy of Natural Sciences in Philadelphia and named them *Boykinia aconitifolia*. He wrote “*This curious plant was discovered by the late arduous and eccentric Prussian collector, Mr. Kinn.*”! Mathias Kinn, a German who came to North America in the early 1800’s to collect plants, has been described elsewhere as being more than a little strange! Barnhart writes that Kinn spent most of his time in the wilderness where he dressed like an Indian and was known as the Indian plant collector. Boykin's Lobelia (*Lobelia boykinii*) and Boykin's Miami-mist (*Phacelia purshii* var. *boykinii*) are also named after Boykin.

Boykinia species are members of the *Saxifragaceae* (Saxifrage) family. According to Weakley there are seven species within the *Boykinia* genus, but *Boykinia aconitifolia* is the only one found in the Eastern United States. It prefers to grow in wet locations, like the spray areas around waterfalls where Lucy and I saw our specimens, and that's probably why it's considered to be uncommon. Saxifrage (*Micranthes*) species have a more widespread distribution and are less picky about where they grow.

Boykinia aconitifolia has 5 white petals and 5 stamens, unlike *Micranthes* species which have 5 petals and 10 stamens. Superficially, the flowers resemble those of Early Saxifrage (*Micranthes virginensis*). They are easily distinguished from the blooms of Tassel Rue (*Trautvetteria carolinensis*) which has no petals, only stamens and pistils.

The basal leaves of *Boykinia aconitifolia* have long petioles and are palmately lobed with sharply divided toothed leaflets, resembling small *Trautvetteria* leaves. They are clearly different from the ovate leaves of *Micranthes virginensis*.



Brook Saxifrage (*Boykinia aconitifolia*) Leaves



Brook Saxifrage (*Boykinia aconitifolia*) Blooms



Early Saxifrage (*Micranthes virginiensis*) Leaves



Early Saxifrage (*Micranthes virginiensis*) Blooms



Tassel Rue (*Trautvetteria caroliniensis*) Leaves



Tassel Rue (*Trautvetteria caroliniensis*) Blooms

I have seen Coastal Brookfoam (*Boykinia occidentalis*) blooming at the base of waterfalls in the Pacific Northwest. As you can see from these pictures, it closely resembles our local species and thus was easy to identify.



Coastal Brookfoam (*Boykinia occidentalis*) Leaves



Coastal Brookfoam (*Boykinia occidentalis*) Blooms

Next time you are hiking near a waterfall or cascade, examine the area around the spray zone and see if you can find *Boykinia aconitifolia*. It's a special plant.

Thanks to Ken Borgfeldt, Master Recorder, for providing the information on plant observations.

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Eurybia

Lucy Prim

Last summer, while coming down the trail from Cedar Rock in DuPont Forest, where the trail goes along a sunny rock, right before it ends at Little River Trail, I noticed some little aster-like purple flowers about 10 inches high, growing in the hot sun. I thought they looked unusual, not like the typical Aster, so I excitedly took pictures, and when I got home I tried to identify it. Since it looked like an Aster, I looked at all the *Symphyotrichum* pictures in “Name That Plant”, but nothing looked quite right! My Aster had a long narrow involucre and none of the Asters on that site had a long involucre just like that. I thought maybe it was a strange *Symphyotrichum retroflexum* that had gotten eaten by animals and that’s why it was so short—but then why such a tall, narrow involucre? Very mysterious!

Months later, under circumstances I can’t recall, I suddenly realized this plant isn’t in the *Symphyotrichum* genus at all, but is one of our four Carolina mountain *Eurybias*, *Eurybia surculosa*! There it was in “Name That Plant”, the pictures matching exactly.

After making that delightful discovery, I wondered why some Aster-type flowers have been categorized as *Eurybia*, and others as *Symphyotrichum*. I thought it would be a good article for Shortia, to write about the reasoning for that distinction, but I wasn’t able to find out! I googled about here and there on the internet, and looked at Google Scholar, but I couldn’t find anything to explain it. Maybe I’m not a very good detective for investigating this sort of thing. Or maybe the reason for the distinction is esoteric, not something that could easily be explained in layman’s terms. If any of you, dear readers, can find out what the reason is, please tell me and it will be the subject of another Shortia article—that is if I can understand it. Or if you feel like making a contribution to Shortia, write the article yourself! You’d be guaranteed at least one eager reader—me!

According to the distribution maps in Weakley’s Flora, we have four *Eurybias* that grow here in our mountains. We often see *Eurybia divaricata* on our walks around DuPont Forest and other lower elevation sites. We also see a plant that looks exactly like it up on the Parkway, which is where we are supposed to see another species, *E. chlorolepis*, according to Weakley’s Flora. The Flora says that *E. chlorolepis* is usually found over 4,000 feet and has more than 10 rays, and the rays are 15-20 mm long, which makes the flower bigger than *E. divaricata*. The elevation of the Pisgah Inn is around 5,000 feet, so all those *Eurybias* growing beside the Parkway, the ones that we walk past every time we do Frying Pan Gap, ought to be *E. chlorolepis* according to Weakley’s Flora. But are they? Maybe they aren’t! I remember counting and measuring petals one year and thinking they matched *E. divaricata*. This year I’ll try measuring and counting again.

The fourth *Eurybia* we have in our mountains, *Eurybia macrophylla*, is also usually up in higher elevations. There is a patch of it near the Pisgah Inn off the parking lot as we start up Buck Springs Trail. We identify it when we see a colonial patch of large heart-shaped leaves, all jumbled up together like a beautiful leafy mat on the ground. Later in the summer it may have a few flower stems rising out of the mat of leaves. Even without the flowers, we should be able to identify it with no problem since there is nothing else quite like it.

I have made a chart of the four *Eurybias* we may find as we walk about in our mountains. I'll be on the look-out for *E. chlorolepis* this year, but I won't be at all surprised if I find (in our area, at least) that Weakley's 4,000 foot elevation rule doesn't hold up!



Eurybia chlorolepis
Mountain Wood Aster



Eurybia divaricata
White Wood Aster



Eurybia macrophylla
Bigleaf Aster

Look for a mat of very big cordate leaves.



Eurybia surculosa
Creeping Aster

Notice the long, narrow involucre.



Eurybia surculosa
Creeping Aster

Growing around sunny rocks at
DuPont Forest.



Eurybia surculosa
Creeping Aster

Unlike our other *Eurybias*, this one
has linear leaves.



Eurybia

surculosa

Found in sunny, rocky places.

Under 1' tall. Involucre

tall and narrow - 9-

12 mm. Purple

flowers.

divaricata

1"

Usually found $\leq 4000'$

Rays usually 5-10

Rays usually 10-15 mm

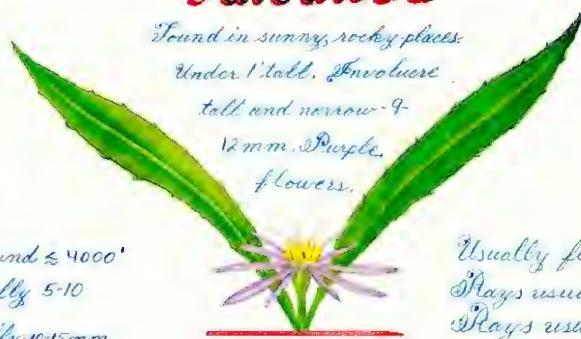
chlorolepis

Usually found $\geq 4000'$

Rays usually > 10

Rays usually 15-20 mm

1½"



macrophylla

Rarely found in upper meadow, more common in mountains especially moderate to high elevation ridge tops. Basal leaves can be very big, some over 12" long. Flowers white to purplish. Colonial patches of cordate leaves.



Using the Wildflower Search App

By Penny Longhurst

You have probably noticed on our field trips that many members are using smartphone apps to identify plants. However, one disadvantage when using apps like PlantNet and Seek is that they require cell phone service which is not always available where we hike. Because the Wildflower Search app data are loaded onto your phone and you input the information about your plant manually, an internet connection is not required. A desktop version is also available for home use.

The home page for Wildflower Search (figure 1) offers a choice to download free apps for a specific state or province for either Android or iPhone/iPad. I have taken advantage of this on several trips across the country. You can access the page through this QR code or from the web address listed under Sources. Also on the website home page, in the column to the left, is access to the desktop version. With both the desktop version and the app you can input a specific location for viewing plants. This is a huge advantage over the other apps which sometimes mistakenly identify plants that don't grow in this area or even in this state.



The screenshot shows the Wildflower Search website's main page. On the left, there's a sidebar with various filters: Set New Location (with a map), Enter Coordinates, Plant Elevation (set to Now), Observation Time, Plant Category (All Plants), Flower Petals, Flower Color, Flower Size, Leaf Attachment, Habitat, and Plant Name. Below these is a dropdown menu for Family—>Genus—>Species. At the bottom of the sidebar are search and refresh buttons. The main content area has a header "Wildflower Search" and "Wildflower Identification Website". It features a search bar "Search for wildflowers by location, color, shape and time", a link "Click here for Instructions", and a "Login" button. The central part of the page is titled "Free Wildflower Apps" and contains a table comparing locations to their corresponding Android and iPhone/iPad app codes. To the right of the table are two screenshots of the app interface, showing plant lists and maps.

Location	Android	iPhone/iPad
Alabama	AL	AL
Alberta	AB	AB
Arizona	AZ	AZ
Arkansas	AR	AR
British Columbia	BC	BC
California (Central)	CAC	CAC
California (Death Valley)	DV	DV
California (North)	CAN	CAN
California (San Francisco Bay Area)	SF	SF
California (South)	CAS	CAS
Colorado	CO	CO
Connecticut (New England)	VT2	VT2
Death Valley	DV	DV
Delaware	DE	DE
Florida	FL	FL
Georgia	GA	GA
Glacier/Waterton National Parks	GL	GL
Great Smoky Mountains NP	GS	GS
Hawaii	HI	HI
Idaho	ID	ID
Illinois	IL	IL

Figure 1. Wildflower Search Home Page where you can choose an app to download or use the desktop version.

The desktop version and the phone app are very similar. They ask you to input the location and elevation where you saw the plant, observation time (month and week within the month), plant category (wildflower, shrub, moss, etc.), how many petals and what color the flower is (the desktop version also asks for the relative size of the flower), the leaf attachment (alternate, opposite, basal, whorled), and habitat (more choices are available on the desktop version). You can then see pictures of all the plants that meet the criteria you entered. You do not need to answer every query. However, doing so will

reduce the number of choices presented. If you can make a guess for the genus of the plant, you can also enter it without inputting any other information. After entering your answers, plants that meet your criteria are shown.

An example of a desktop search for wildflowers that might be seen near the intersection of Hwy 276 and the Blue Ridge Parkway during the 3rd week of June is shown in figure 2. I chose the location from the map. The elevation there is 4,530 ft. I asked for wildflowers with no obvious petals and white color growing in a riparian (wet) setting and got 36 possible plants. You may need to play around with some of the choices, especially with Petals or Habitat to find your plant. Try several different options. The desktop version includes 8,319 wildflowers for North Carolina. This was reduced to 1,592 based on location and 809 for elevation. There were 94 plants with no obvious petals and for 36 of those the petals were white in color.

The screenshot shows a desktop browser window for 'Wildflower Search' at wildflowersearch.org/search?oldstate=gmrc%3A35.367%2C-82.791%3Bcat%3AW%3Bpetals%3Ano%3Blocation%3AUS-276%2C+Canton%2C+NC+.... The search parameters are:

Category	Wildflowers	8319
Location	US-276, Canton, NC 28716, USA	1592
Elevation	4530 feet	809
Observation Time	3rd week of June	648
Flowers	No obvious petals	94
Flower Color	white	36

Search Results

Click on an image for more information.

Plant Name	Common Name	Percentage
Carolina bugbane	<i>Actaea carolinensis</i>	85%
mountain meadow-rue	<i>Thalictrum clavatum</i>	58%
Canada mayflower	<i>Maianthemum canadense</i>	54%
Howell's pussytoes	<i>Antennaria howellii</i>	48%
doll's-eyes	<i>Actaea pachypoda</i>	48%
great Indian plantain	<i>Arnoglossum reniforme</i>	45%
Canada woodnettle	<i>Laportea canadensis</i>	43%
silvery nailwort	<i>Paronychia argyrocoma</i>	43%

Figure 2. Search results for wildflowers with no obvious petals and white color growing in a riparian setting.

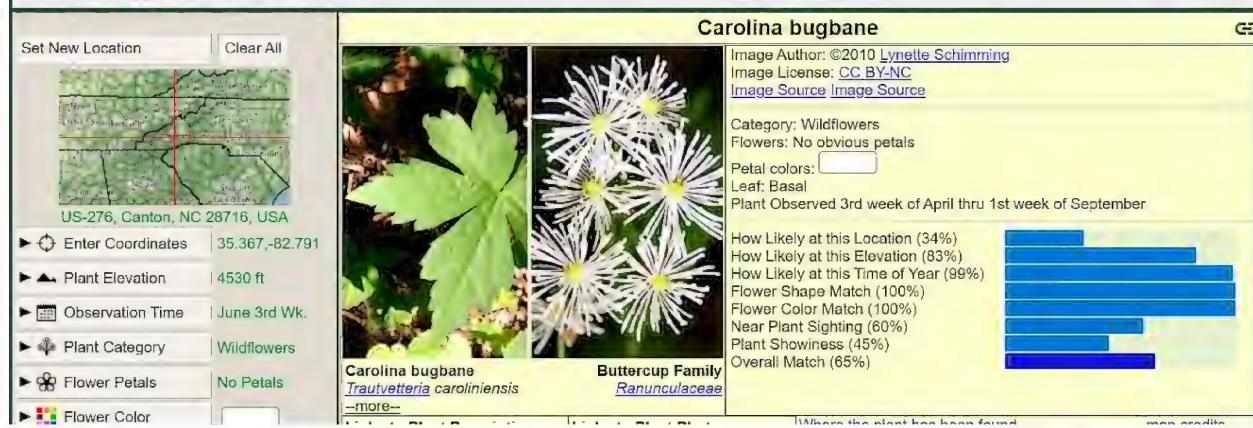


Figure 3. Tassel Rue (*Trautvetteria carolinensis*) was considered the most likely wildflower to be seen under those criteria.

The Wildflower Search app includes 3,838 plants found in North Carolina. Apps are updated in late winter-early spring each year. The choices of types of plants, petal color and number, leaf arrangement, etc. are similar to those on the desktop. Click the gray button at top right to go to a different page to change the elevation and the time of year. You can also click on the map, but our only choices are the Saluda or Sylva area, so including an elevation will increase the accuracy. Please note that this description is for the Android version. I don't even know how to turn on an iPhone!



Figure 4. The Android phone app startup page.

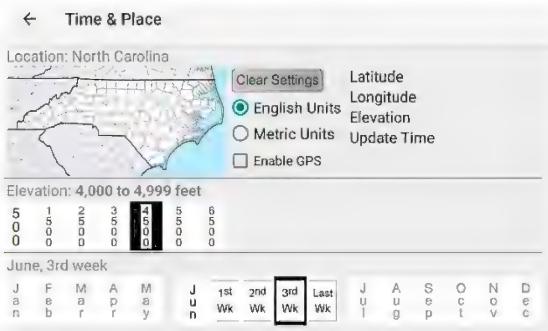


Figure 5. Setting the Elevation and Time of Year.

Returning to the app main page, the number of plants has been reduced to 38 (figure 6). Click on the green "Show 38 Plants" button to see them, ranked in order of likelihood of meeting your criteria (figure 7). You can now scroll down and see if your plant is there.

11:30 AM

North Carolina Wildflowers

Show 38 Plants

Time & Place: North Carolina, 4,500 feet, June, 3rd week

Plant Type: **Wildflowers** and other forbs.

Wildflower Shrub Conifer Other Trees Vine Cactus Aquatic Grass Fern Moss Lich

Flower Color: White.

Petals: No obvious petals

None One Two Three Four Five Six Many Pea Irregular

Leaf Arrangement:

Alpine Cane Desert Disturbed Forest Grassland

Meadow Riparian Rocky Salt Marsh Sand Wetland

Figure 6. Wildflowers with white flowers, and no petals, found in riparian locations at 4,500ft. elevation

38 Plants Selected

Enter Plant Name

Trautvetteria carolinensis
Carolina bugbane, wild bugbane
Buttercup Family
(Ranunculaceae)
Native

Thalictrum clavatum
mountain meadow-rue
Buttercup Family
(Ranunculaceae)
Native

Arnoglossum reniforme
great Indian plantain
Aster Family
(Asteraceae)
Native

Thalictrum pubescens
king of the meadow
Buttercup Family
(Ranunculaceae)
Native

Figure 7. Possible wildflowers based on criteria shown in figure 6.

If you click on any plant picture, you will be transferred to a page with information about that plant with tabs for “Photos” (figure 8), “Info”, “Map” showing where the plant has been seen, and “Description” tabs (figure 9). The Description includes identifying features collected from multiple sources such as Wikipedia, Flora of North America, and (if it is found there) Illinois Wildflowers, to help you confirm that this is your plant. The “Links” tab includes links to descriptions on other websites and more photos that you can access if you have cell phone service.

Trautvetteria caroliniensis -- Carolina bugbanePhoto ©Susan McDougall, rainierinbloom.com

Lacking petals, and with ephemeral sepals, the "flower" of this common Buttercup Family member is mostly stamens, which are long and showy.

Figure 8. Photos of *Trautvetteria caroliniensis*.From [Flora of North America](#)**False Bugbane**

Trautvetteria caroliniensis
Buttercup family (Ranunculaceae)

Herbs, 0.5-1.5 m.

Rhizome with **fascicles** of fibrous roots.

Stems 1-several, erect, usually unbranched below **inflorescence**, 0.5-1.5 m, glabrous or glabrate.

Leaves: basal leaves with petiole to 4.5dm, blade 1-3(-4) dm wide, lobe apex acute; caudine leaves reduced toward **apex** of stem.

Inflorescences: peduncle 1-8dm; pedicel densely pubescent with minute, hooked trichomes.

Flowers: **stamens** white, 5-10 mm.

Utricles papery, veins prominent along angles and on 2 **adaxial** faces.

$2n = 16$.

Phenology: Flowering summer.

Elevation: 0-3800 m.

Habitat: Wooded seepage slopes, stream banks, bogs, rarely prairies or bluffs, western spruce-fir forests and subalpine meadows.

Distribution: BC, AL, AZ, AR, CA, CO, FL, GA, ID, IL, KY, MD, MT, MT, NM, NC, OR, PA, SC, TN, UT, VA, WA, W.VA, WY; Mexico; e Asia.

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Figure 9. Description of *Trautvetteria caroliniensis*

Apps can be helpful but sometimes they come up with misleading identifications. Clearly Wildflower Search is not an instant gratification, point and click app. It requires some work on your part. However, the amount of information available on it is quite remarkable and very useful for in-the-field and out-of-cell phone service identifications. The photos and description sections are like having several books on your phone. Using it might encourage us to slow down and consider the distinguishing features of a plant carefully before whipping out the phone and getting a potential identification without putting much thought into the process of how we got there.

Sources:

Wildflower Search App. <https://wildflowersearch.org/search?page=Apps>

Wildflower Search Desktop Viewer. <https://wildflowersearch.org/>

SHORTIA

A quarterly publication of the Western Carolina Botanical Club
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Vol. XXXV Vol. 2

Editor: Ken Borgfeldt

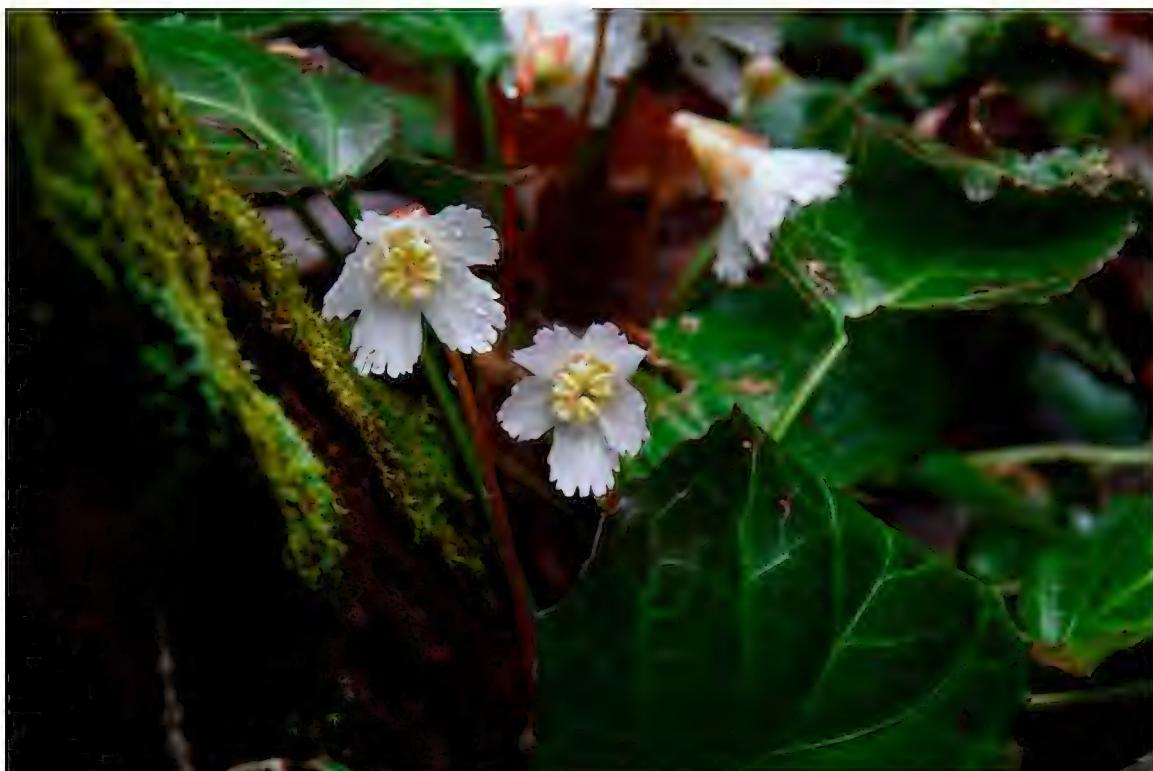
2Q 2023

The mission of the Club is to identify and study native plants and their habitats and to advocate the protection of biodiversity in our natural world. Membership is open to all. Individual/family memberships are \$15/year. Lifetime membership is \$150. Send [completed membership form](#) and dues to Western Carolina Botanical Club, 232 Frazier Road, Brevard, NC 28712

SHORTIA

NEWSLETTER OF THE

WESTERN CAROLINA BOTANICAL CLUB



Shortia galacifolia

Oconee Bells

Fall 2023

Board of Directors

President	Cindy Carpenter
Vice-President	Carol McCall
Secretary	Aleta Tisdale
Treasurer	Harriet Walls
Members at Large	Charlie Brice, Lynn Mosura-Bliss & Rebecca Sewell

MEMBER NEWS

Field Trip Cancellations: Occasionally, field trips must be canceled or changed either for weather conditions or other reasons such as road closings. Such changes are sent out by email to all members by 7 AM the day of the field trip. If you do not have email access, please call the leader, co-leader, or recorder (whose phone numbers are listed on the schedule) to be sure that the walk is going to go as planned. Indoor programs are canceled when Henderson County Schools are closed (see <http://www.hendersoncountypublicschoolsnc.org>) but NOT necessarily canceled because of the delayed opening.

For any change of address, email or telephone number, please send an email to wcbotanicalclub@gmail.com.

Our webpage is located at <http://wcbotanicalclub.org>



There's a Native Plant Society organizing in Cashiers. It's early days but there are plans to apply to become a chapter of the North Carolina Native Plant Society, covering locales within comfortable driving distance of Cashiers. Anyone interested in knowing more can sign-up for the initial mailing list at <https://theplacemakersacademy.com/cnps/> or by sending such request to oconeebellnps@gmail.com

President's Message

Cindy Carpenter



In her book *Braiding Sweetgrass*, author Robin Wall Kimmerer tells the story of the beginning of her college career. Her advisor asked her why she wanted to study botany. She replied that she wanted to learn “why asters and goldenrod looked so beautiful together.” He replied that that wasn’t science and botanists don’t concern themselves with such a question.

Disciplining herself on the science path she earned a PhD in botany, eventually circling back to her younger self’s question. Finally, she realized she could move comfortably between the scientific and

spiritual, like the complementary colors of purple and gold. This gave her a fuller way of looking at the world. Who among us plant enthusiasts haven’t marveled at the beauty of purple asters and goldenrod in September sunshine? Or any number of combinations of color and texture and form we experience on our forays around beautiful western North Carolina? And soon we will be treated to fall color as trees prepare for winter and golden ferns wither. I think our membership is like a field of asters and goldenrod. Attend a walk or winter program or read *Shortia* issues and you can perceive this. We have different levels of expertise, skill, interest and recall. Yet there’s a complementary generosity that takes place. There’s the artist’s eye, the scientist’s precision, the naturalist’s curiosity, the teacher’s patience, the child’s wonder and cross-pollination of these characteristics and more. How fortunate we are to value biodiversity and do what we can to learn about it, enjoy it, share it and advocate for it. Since my first exposure to the Western Carolina Botanical Club in 1985 when I learned from the team inventorying Holmes Educational State Forest that a buttercup is not just a buttercup, that several species grow here, not all showy, I have felt great respect for this group. Thank you all for supporting it. I am so grateful for the botanists among us who bring their patient plant study and passion to our walks and to this newsletter. I don’t know what the Club would be without their dedication. I welcome new board members Vice-President Carol McCall and Members-at-Large, Lynn Mosura-Bliss and Rebecca Sewell and thank them for stepping up. Heartfelt thanks and admiration extend especially to Past-President Joe Standaert for his organized and good natured leadership through protocols COVID necessitated, our 50th Anniversary celebration and to opening the door to future engagement with our newest state park. In this *Shortia* issue you will find his summary of the recent community engagement session he attended and how you can give input to the development plan. Joe has helped and continues to help identify species for our plant lists both during the walks and afterwards. He studies his photographs and those of our other photographers so we too can learn from the comfort of home. Teamwork! He has also volunteered as trip leader and recorder and led the search for new board members. All this and more Joe gave to the Club while undergoing a schedule of chemotherapy which thankfully he has tolerated well. And he keeps on giving. Yay Joe! Yay for us! Our Secretary and Scheduler Aleta Tisdale has been busy planning our winter program schedule at Bullington Gardens in Hendersonville. Our club has 124 members, and I hope to meet more of you there or along our walks. Please feel free to share your thoughts and ideas about our club (wcbotanicalclub@gmail.com). Please consider increasing your engagement if you can. You don’t have to attend programs to do so.

In this beautiful and diverse area there are always more plants to become familiar with, more fascinating views up close in a flower and beauty around every trail turn, more habitats to explore, more questions to ask, more stewardship to inspire. The Western Carolina Botanical Club enriches our relationship with this beautiful world. The synergy of asters and goldenrod!

Reference: Kimmerer, Robin Wall. *Braiding Sweetgrass*, Milkweed Editions, Minneapolis, MN, 2013, p.39



Minutes for the July 7, 2023 Annual Meeting

1. Outgoing President Joe Standaert welcomed members to the 50th Annual Meeting of the Western Carolina Botanical Club. He:
 - a. Thanked all members for their contributions over the past year.
 - b. Thanked Penny and Ken for all they have done.
 - c. Called for a moment of silence for all our members no longer with us.
2. The following officers were elected electronically:
 - a. President – Cindy Carpenter
 - b. Vice-President – Carol McCall
 - c. Member at Large – Rebecca Sewel
 - d. Member at Large – Lynn Mosura-Bliss
3. Joe mentioned other appointees:
 - a. Aleta Tisdale – Scheduler
 - b. Immediate Past President / Nominating Chair – Joe Standaert
4. Joe presented an Honorary lifetime membership to Betty Jones.
 - a. Betty accepted with a humorous brief talk on her early days in the Club.
5. Joe presented *in absentia* an overdue certificate to Juanita and Larason, last year's Honorary Lifetime members.
6. Joe asked the Secretary to summarize the minutes from the last annual meeting.
 - a. The Secretary (Aleta) did so.
 - b. Penny made a motion to approve, and the members voted to approve last year's annual meeting minutes.
7. Joe delivered the President's Report, included here:
 - This year we have ~114 paid members, of which ~30 are new members.
 - We again donated \$800 to Bullington Gardens.
 - We donated \$50 to the Botanical Gardens of Asheville.
 - We completed both the Fall and Spring outdoor schedules, post COVID
 - For the Fall 2023 Schedule, Aleta Tisdale has volunteered to take over the Scheduler position.
 - Penny continued with Virtual wildflower posts for all our walks, but this winter did weekly posts, alphabetically by genus from the photos in the club database. These posts are on our website and provide a great resource.
 - Mary Standaert volunteered to re-start the Indoor meetings (twice per month). Refreshments were provided at the meetings with Mary hosting, and the Board approved tokens of appreciation for Club members doing presentations.

- A gala 50th Anniversary celebration event for the WCBC was held at Bullington on March 24th. Joe and Mary organized this event with the help of several members. Gary Kauffman was our guest speaker and the club provided display tables, a custom “birthday” cake and lunch.
- A second Jocassee Boat trip was organized by Penny to see the lake and the Oconee Bells.
- Three club members attended the five-day Joint Field Meetings of the Botanical Society of America, Torrey Botanical Society & Philadelphia Botanical Club at Lake Junaluska, April 23-27, 2023. Carrie Blair was one of the principal organizers.
- The Board approved adding an additional Member at Large to the slate of officers.
- The Board approved honoring Betty Jones with a lifetime honorary membership in appreciation for all the work she has done for the Club.
- The Club has been contacted by Glenn Middleton, the Executive Director for the Friends of Pisgah View State Park (FPVSP), the non-profit co-founded to support NC's newest state park, Pisgah View State Park (PVSP). They would like us to potentially collaborate to help develop the new State Park in Candler.

8. On behalf of the club, the Secretary, Aleta, presented Joe with a thank you card and small gift in appreciation for all he has done for the Club during his presidency, including, but not limited to, organizing the anniversary party, filling in as scheduler and as walk leader/recorder when needed.

9. Joe asked all officers and Committee chairs to give their reports, included with these minutes if not stated below.

- a. Treasurer – Harriet – separate document included below
- b. Master Recorder – Ken Borgfeldt – no special remarks
- c. Bullington Gardens – Juanita Lambert – absent
- d. Shortia Editor – Ken Borgfeldt - stated that “Shortia continues to be published quarterly with a President’s Message and several excellent articles by members as submitted – primarily by Lucy and Penny.”
- e. Scheduler – Aleta - “Thanks to everyone who has stepped up to lead, co-lead, and record this year. I am planning to have a scheduling party at Bullington over the winter to create the Spring schedule and I hope to see you all there with ideas for walks. If you have ideas, please email them to me anytime and we will try to work them into our schedule. Thank you.”
- f. Webmaster – Penny – separate document included below

10. Joe announced a plant exchange and a walk after lunch.

11. Joe passed the gavels to the new president, Cindy Carpenter, who accepted them with a few remarks of thanks.

12. New Club President, Cindy, adjourned the annual business meeting.

Respectfully submitted,
Aleta Tisdale, Club Secretary



WCBC Treasurer's Annual Report for Fiscal Year 2022-2023

Membership:

As of June 30, 2023, we have 115 members, many of which are family memberships. This includes 31 new memberships, 2 honorary memberships and 7 lifetime memberships. The Lifetime membership option was introduced prior to the last annual membership meeting and six new lifetime memberships have been added this year.

Financial:

Our fiscal year began with a balance of \$4686.16 in the bank. Since that time income has been \$2714 which includes \$2561 from dues and \$153 from donations. Expenses have included \$457.82 for programs for gifts for speakers (\$139.38) plus holiday expenses and a luncheon when we celebrated the club's 50th Anniversary in March (\$318.44). Also included was a \$50 donation to Botanical Gardens of Asheville and \$800 to Bullington Gardens. As of June 30, 2023 we have \$6092.34 in the bank. This includes \$72.61 (corrected from \$63.03 reported in 2022 (amount included \$9.58 for a flash drive for the incoming treasurer)) donated to the club by Jeanne Smith to print Buck Spring Nature Trail brochures that are available at the Pisgah Inn.

Respectfully submitted,
Harriet Walls, Treasurer



Webmaster's Report - July 1, 2023

As of July 1, 2023, we've published 324 posts. We have 86 subscribers who receive emails whenever we post, as do club members.

In 2022 we published 49 posts & had 181,194 views (when a visitor loads or reloads a page) & 16,679 visitors (when a user or browser goes to our site for the first-time during a given period [day, week, month, year]).

Since January 2023 we've published 35 posts, had 122,374 views, & 20,181 visitors. So, we are way ahead of last year. This year the number of visitors has gradually increased from 300 to just over 1,000 each week. During this period, the Plant Key for Bryophytes had the greatest number of views, followed by our Home Page & the Plant Keys for Ferns & Violets. If you type "NC" followed by "mosses", "ferns", "violets", "clubmosses", "smartweed", "trilliums", or "turtleheads" in a Google search box, our site usually appears within the first 5 listings.

In 2023 we averaged around 300 views on the day before posting and 1,700 views on the day of posting and sending out the email. The post with the greatest number of views on the day of posting (3,676) remains the "Sky Valley Stop-and-Go" field trip on 6/27/22. Strangely, the greatest number of views ever was 4,724 by 193 visitors on 5/8/23. They were principally looking at the home page and did not appear to be directed by any specific referrer. However, on the week of March 20 - 26, 293 views were directed to the Bryophytes Plant Key from a course offered at Appalachian State University.

Over the winter a series of posts entitled "Botanical Names Beginning With ..." each letter of the alphabet was started and, amazingly, exactly filled all the weeks until Field Trips started again. Several missing plant pictures have been added since the original posting as they are discovered on field trips, such as Ken's finding of *Ilex verticillata* on our recent walk at Holmes.

The most popular document downloaded from our site each year is the Rudnick Art Trail map for the Kellogg Center trail system (688 in 2022, 385 in 2023) followed by our membership brochure (133 this year). If you google "Kellogg Center trails" we are first or second in the list of results.

The item that receives the greatest number of spam comments is a picture taken by Lucy entitled "Ah! Now I Can See Them!" which features Randy, Kent, & Joe looking at Fringed Campion plants on the Tanbark trail. Go figure!

Respectfully submitted,
Penny Longhurst, Webmaster

The New Pisgah View State Park - Status

Joe Standaert

As reported before, we have joined with the Friends of Pisgah View State Park to collaborate with them as the new park develops. The park is off Hwy 151 in Hominy Creek in the shadow of Mt. Pisgah and just down the twisty mountain road from the start of our Elk Pasture walk. The park will be 1,600 acres and is the site of the previous Pisgah View Ranch. It is not slated to open until 2025. There are a lot of trails, but they need a lot of work. There also is a disjunct property that is apparently an old growth area.

My anticipated involvement for the club might be botanical surveys and maybe an interpretive nature trail, if that is in their plans. They, of course, also have State Park naturalists involved. They are also planning onsite educational programs.

I attended the first public input session at Hominy Creek. It was a general survey session getting preferences of the public for preferred amenities it was conducted by Equinox consultants. There is also an online input survey you can fill out here: <https://click.pstmrk.it/3s/forms.gle/zttGHAQbSJrQpwJr6/qBWp/TzywAQ/AQ/f8fc38b-0041-4267-a0c0-a4c2bdaf6788/2/8WT08mY-m>

The timeline:

- 1st Public Input
- Winter 2023, Preliminary Master Plan
- 2nd Public Input
- Spring 2024, Draft Master Plan
- 3rd Public Input
- Summer 2024, Final Master
- 2025, Opening

The website for the new Pisgah View State Park is <https://www.ncparks.gov/state-parks/pisgah-view-state-park>
The Friends non-profit organization will have a website shortly.



Farewell Cornus!

Penny Longhurst

Have you ever wondered how plants that look so different like Flowering Dogwood, Alternate-leaved Dogwood, and Bunchberry, could possibly be in the same genus? What on earth was Linnaeus thinking!? Well, you are not alone. There have been discussions about this for several centuries! The time is coming when we will have to learn new names for several of our favorite plants. Or we could switch to Ken's common gripe, which is that we should use only common names!

Referring to Weakley and many other sources, the *Cornaceae* family members found in the Southeastern United States have been divided into four different genera: *Benthamidia*, *Chamaepericlymenum*, *Cornus*, and *Swida*. Currently these names are not accepted by ITIS (Integrated Taxonomic Information System), the taxonomic source we use for our plant names, where the *Cornaceae* family information was last updated in 2011. The non-native Cornelian Cherry (*Cornus mas*) is not found in the Carolina mountains and is rarer than rare in surrounding states so, fortunately, we can forget about that one. The *Cornaceae* species found in our database are described below.

Genus: Big-bracted Dogwood (*Benthamidia*)

We are all familiar with the Big-bracted Dogwoods. These members of the *Benthamidia* genus have large white petal-like bracts surrounding small central flowers. The Flowering Dogwood (*Cornus florida*; *Benthamidia florida*) is a small deciduous tree with checkerboard-like scales on the trunk bark. Its leaves are opposite and elliptical with short petioles and prominent veins. The bright red ripe fruit, which is attractive to birds and critters, appears in clusters. I always wondered how Flowering Dogwood got the name *Cornus florida*, since it doesn't grow in Florida. Well, *florida* is derived from the Latin for "flowering", referring to its large flowers.



Flowering Dogwood Leaves



Flowering Dogwood Blooms



Flowering Dogwood Fruit

A non-native member of the *Benthamidia* genus that is commonly used in landscaping is Kousa Dogwood (*Cornus kousa*; *Benthamidia japonica*). Another deciduous tree, it grows much faster and taller than the Flowering Dogwood. Its leaves are longer and narrower, as are the flower bracts. It has a large compound fruit that changes from green to red when ripe. The fruit is enjoyed by both birds and squirrels and can apparently be safely consumed by humans. However, it sounds like a lot of work since you need to separate the skin from the pulp and then spit out the seeds. The flavor has been described as a cross between a mango and pumpkin. Maybe next year!



Kousa Dogwood Leaves



Kousa Dogwood Blooms



Kousa Dogwood Fruit

Another member of the *Benthamidia* genus is the Pacific or Western Dogwood (*Cornus nuttallii*; *Benthamidia nuttallii*), named after Thomas Nuttall, a self-taught naturalist who was a leading American botanist in the 1800's. A beautiful tree, it looks very similar to the Flowering Dogwood but with 4-6 much larger bracts. However, you'll need to travel to the Pacific Northwest to find it.



Genus: Dwarf Dogwood (*Chamaepericlymenum*)

Bunchberry (*Cornus canadensis*; *Chamaepericlymenum canadense*) is one of my favorite plants. The spring flowers are adorable, and the fall berries are a beautiful bright red. The plant is low-growing and in many Northern states forms a wonderful ground cover. However, the plant does not grow in the Appalachian Mountains south of Virginia and, although it's in our database, the club has never seen it on field trips. The database was initially based on plants included in club member Dick Smith's book "Wildflowers of the Southern Appalachians". Dick's Southern Appalachians ranged from Georgia/Alabama to the Virginia/Maryland mountains. Bunchberry, being a herb, is the only *Cornus* species described in his book and is not included in any other reference pertaining to flora of the Carolinas. We should probably be relieved that we won't find it on our walks. Can you imagine trying to say "*Chamaepericlymenum*", let alone spell it!

As you can see from the photographs, Bunchberry plants look like miniature Flowering Dogwoods. The flowers have 4 large white bracts surrounding the central flowers and the leaves and fruit are similar too.



Bunchberry Leaves



Bunchberry Bloom



Bunchberry Fruit

Genus: Dogwood (*Swida*)

The flowers of the members of the genus *Swida* are completely different than those of other *Cornaceae*. *Swida* species have multiple small flowers in flat-topped clusters or cymes, like native Viburnums.

Alternate-leaved Dogwood (*Cornus alternifolia*; *Swida alternifolia*) is the member of the genus *Swida* that we see most often. It is common in the mountains but rare elsewhere in the Carolinas. The leaves are alternate with long petioles and usually clustered near the twig tips. The multiple flowers have small white or cream-colored petals on each flat-topped cyme. The fruit is colored black/blue and borne on red stems.



Alternate-leaved Dogwood Leaves



Alternate-leaved Dogwood Blooms



Alternate-leaved Dogwood Fruit

Silky or Swamp Dogwood (*Cornus amomum*; *Swida amomum*) as the name suggests, prefers to grow in damp areas, and is often used for stream restoration projects. You can find some growing at the base of High Falls in DuPont State Recreational Forest and at the Park at Flat Rock. Its stems are reddish with silky hairs. I think the flowers are more attractive than those of Alternate-leaved Dogwood. The white petals are narrower, and the colored ovary can often be seen in the center of the flower. The ripe fruit is a shiny blue.



Silky or Swamp Dogwood Leaves



Silky or Swamp Dogwood Blooms



Silky or Swamp Dogwood Fruit

Red-osier Dogwood (*Cornus sericea*; *Swida sericea*)

Red-osier Dogwood is included in our database, but the club has seen it only on the Oklawaha Greenway, where I suspect it was planted during one of Wes's projects, and at the North Carolina Arboretum. It is listed in Weakley, but only grows to the North and West of the Carolinas, although it can be found at local plant nurseries. In fact, the Southeast is the only place in the USA where it doesn't grow! The pictures below were taken in Colorado and in Michigan. As predicted, the stems are red. The flowers are like those of Swamp Dogwood, but the fruits are white.



Red-osier Dogwood Leaves



Red-osier Dogwood Blooms



Red-osier Dogwood Fruit

So, one of these days we'll have to bite the bullet and switch, but at least you have been forewarned! Fortunately, we will have only two new genera to learn. We can practice before the day of reckoning.

Acknowledgements: Thanks to Ken Borgfeldt, Master Recorder, for providing information about club plant sightings.

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Plant Identification – “Short Keys”

Joe Standaert

Despite recent developments in the use of plant identification apps (I use PlantNet!), I am still of the old school in that I rely on technical, dichotomous botanical keys as my ultimate “authority”. As you probably know, a dichotomous key consists of a series of two-choice questions based on plant “key characters” to lead you to an answer. Penny and Ken still give me grief about the times I carried the 1,200-page Radford book on some of our walks! Most of the technical keys are somewhat difficult to follow for several reasons. First, you need to know the “jargon” and an illustrated guide to botanical terms is helpful (Harris, 1994) or the glossary in the plant book. Second, you may not have all the necessary parts of the plant available due to the time of year or photographs taken. Third, the keys cover various geographical areas and you may have many plants out of your area or plants here that are not included, like in a northeast book. (See a bibliography below for some technical keys I use).

All that being said, what I have found helpful, for me, is to gradually develop a set of “short keys”. When we are on our walks, we usually ID common plants fairly quickly, at least to a generic level, so we do not need a comprehensive key system, saving that for complete unknowns. But we (I?) cannot always remember how to separate some common plants to the species level. Even though I remember the ID differences, I then cannot remember which is which! So, I extract major readily seen characters from the main keys and create short cheat sheets. I have probably accumulated 40+ of these and I used to keep them in a Word document on my computer and Kindle etc. Lately, I put in individual short files and use Microsoft OneNote (I used to use Evernote). OneNote is cloud based, so the notes are auto synched to my desktop, laptop, Kindle and phone. They can be used in offline mode for out in the field. Here are some examples of a couple of my “short keys”:

Erigeron:

- E. annuus:** Stem lvs many, mostly toothed, sessile, not clasping, larger >1 cm wide. pubescence mid-stem, long and spreading
- E. strigosus:** Stem lvs few, mostly entire, not clasping, <1 cm wide, pubescence of mid stem short and appressed
- E. pulchellus:** Stem lvs clasping, stoloniferous, 50 rays, 1mm wide
- E. philadelphicus:** Stem lvs clasping, not stoloniferous, 100+ rays, <1mm wide

Astilbe versus Aruncus versus Actaea

Aruncus: smooth stem, no ears on terminal leaf, 2 at node?

Astilbe: Fuzzy=False, stem hairy. Eared terminal leaf, no purple node

Actaea: Purple node, not fuzzy stem

Dryopteris:

- D. intermedia:** Equal or shorter than next pinnule, same side
- D. carthusiana:** lowest inner pinnule: <2x as long, <1.5x wide as mostly opposite pinnule
- D. campyloptera:** lowest inner pinnule: >2-3x as long, >1.5x as wide as mostly alternate pinnule
- D. marginalis:** No teeth on pinnules

Eurybia:

- E. divaricata:** Involucre 4.2-6mm long*3-7mm w, Rays 5-10, 10-15mm, longest peduncle <1.5cm
- E. chlorolepsis:** Involucre 6.5-9mm long*8-10mm, Rays 12-16, 17-18mm, longest peduncle >1.5.cm

Hieracium, / Hypochaeris:

Hieracium caespitosum (Field Hawkweed, Kill Devil): heads several/numerous (5-30), lvs basal, pubescent

Hieracium pilosella (Mouse Ear Hawkweed): heads solitary (most 2), low plant, large yellow

Hypochaeris radicata (Cat's ear): basal lvs, pinnate rounded lobed, hairy

Oxalis:

O. montana: light pink, like spring beauty, acaulescent

O. violacea: pink acaulescent, dark band around the margins of the leaflets

O. grandis: green, caulescent, purple tinged leaves

O. stricta: yellow, caulescent, non-genuflecting pedicles, stems hairy with spreading hairs

O. dillenii: yellow, caulescent, genuflecting pedicles, with stems uniformly hairy w appressed hairs

I also have some “longer short keys”, like 3 or 4 pages to try to cover things like Helianthus and Asters. These I strip down to limit to only “our” area plants and simplify the varieties and detailed key items to basics. I am still not sure I trust them !

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Symphyotrichum phlogifolium

Lucy Prim

Last year, I wrote a Shortia article about four asters whose names start with “P” and felt very pleased that I had carved out a little area of the *Symphyotrichum* puzzle and made it somewhat less puzzling. But on our walk at Big Ridge this September, Joe Standaert found another “P” aster—*Symphyotrichum phlogifolium*! It is rather rare everywhere it’s found, but according to Weakley’s Flora, this is the most likely place for us to find it, here in the Appalachian Mountains. It also can be found in the Piedmont, but even more rarely.

I was excited (after a moment of exasperation) to think I can/should add this one to my list of “Ps”. It looks like *S. patens* if you judge by the leaves clasping around the stem, but there is an easily seen clue that distinguishes them—the color of the disc flowers! With *S. patens*, they are bright yellow and with *S. phlogifolium*, they are white with purplish lobes! Could it really be this easy?

Here is a table showing how these two asters differ:

	<i>S. phlogifolium</i> Appalachian Clasping Aster	<i>S. patens</i> var. <i>patens</i> Common Clasping Aster
Disc flowers	White with purplish lobes	Bright yellow
Pollen	White	Yellow
Anthers	Purplish	Yellow
Stem leaves are:	Thin in texture Soft-pubescent Venation conspicuous	Thick in texture Scabrous—rough to the touch Venation inconspicuous

I was wondering what the epithet “*phlogifolium*” was referring to, wondering how to remember the Latin name for this plant. According to Fernald, in his “Gray’s Manual of Botany”, it comes from “phlox-leaved”. Hmm—Do the leaves look like phlox leaves? I can’t see it myself. But maybe they do and I’m missing something!

One more thing to check is whether ITIS even accepts this plant. Decades ago, this plant was a variety of *patens*, not a species in its own right. What do you think ITIS says? ACCEPTED!

When I heard about this plant growing along the Parkway, somewhere between Big Ridge Overlook and Stony Bald Overlook, on the north side of the Parkway, I decided I’d drive up there and take some more pictures for Shortia. But Joe went up himself that very day, and much to his horror, the mowers and weedwhackers had gone through and cut down everything along that stretch, leaving no sign of the special aster! So I’ll use Joe’s pictures from the day of our walk to accompany this article. No doubt the aster will come back next year and then we can have our eyes peeled and hopefully see it and remember its features and know it is not *patens*, in spite of the clasping leaves—it is *phlogifolium*, judging from the white and purplish centers!

Symphyotrichum phlogifolium



“Disk flowers” are the small tubular flowers in the center of an aster. The “ray flowers” are the petals that radiate out from the center.

Here is a drawing I made of a disk flower. Notice how white the disk flowers are in Joe’s pictures! The structures protruding out of the tubular flower have purple coloring, and then there is the white pollen too, giving the centers a decidedly white and purplish appearance. Nothing about the center is yellow!



Joe-Pye-Weeds (*Eutrochium*)

Penny Longhurst

Each year I try to come up with botanical goals – not always started or accomplished! This year it was to try to identify Joe-Pye-Weeds. I have always had trouble with them – the “Squeeze the Stem” approach just didn’t work for me. I was always afraid of squishing too hard and breaking the plant! Also, interpretation of a squeeze is rather subjective. I tended to rely on the presence of old hollow stems lying around the base of the new plants. A major reason for my quest was that a couple of years ago an uninvited Joe-Pye appeared next to my driveway. After producing two adorable Joeys it was sadly knocked over by a truck. It was then clear that it was not a Hollow-stem Joe-Pye and in this area that left only two other possibilities.

My epiphany came during our May field trip at the Kellogg Center. The meadow was covered with baby Joe-Pye-Weeds, and they looked clearly different from my Joeys. I finally realized what “glaucous” meant. The stems looked whiteish and powdery and some had purple streaks. They were clearly Hollow-stem (*Eutrochium fistulosum*).

Our database includes three Joe-Pye-Weeds: Hollow-stem (*Eutrochium fistulosum*), Spotted (*Eutrochium maculatum*), and Purple-node (*Eutrochium purpureum*). An additional *Eutrochium* species which probably grows in our area, but which we haven’t identified, is Steele’s Joe-Pye-Weed (*Eutrochium steelei*). In older texts you will find Joe-Pye-Weeds identified as *Eupatorium*. Their new genus name, *Eutrochium*, means “whorled”. By contrast, the remaining *Eupatorium* species have mostly opposite leaves.

All Joe-Pye-Weeds have multiple clusters of flowerheads on separate stalks. Each flowerhead consists of disc flowers and no ray flowers. The tubular flowerhead has numerous stringy styles that project beyond the flowerhead and produce its fluffy appearance, as can be seen in the picture of *Eutrochium maculatum*.

The really tall Joe-Pye-Weeds with the huge pinky-purple fuzzy flowerheads that you see growing (or drooping) beside the roads in this area are Hollow-stem Joe-Pye-Weed (*Eutrochium fistulosum*).

Fistulosum means “hollow”. The tallest of the Joe-Pye-Weeds, sometimes reaching 10 feet, it is the most common one we see. A versatile plant, it grows along the Blue Ridge Parkway as well as down in the valleys. You can see lots of it at the Kellogg Center as well as in DuPont State Recreational Forest where the picture to the right was taken at the end of August. The dam at Fawn Lake is a particularly good place to look for them, where you will usually find them covered with bees and butterflies.

Eutrochium fistulosum has the following features:

- The stem is very tall, hollow, and glaucous (covered with a gray or whitish bloom) sometimes tinged with purple to varying degrees. Some dark-stemmed *Eutrochium fistulosum* may be misidentified as *Eutrochium maculatum*.
- The leaves are long-petioled, 4 – 10 inches long, blunt toothed, and in whorls of 3 to 7.
- The flowerhead is a large, rounded corymb containing numerous pinky-purplish disc flowers. There are 4-7 florets per head.





Hollow-stem Joe-Pye-Weed (*Eutrochium fistulosum*) Leaves & Glaucous Stem



Hollow-stem Joe-Pye-Weed (*Eutrochium fistulosum*) Bloom

Spotted Joe-Pye-Weed (*Eutrochium maculatum*) is a plant that we don't find very often, because the mountains of North Carolina are at the very southern limit of its range. The only place that I can remember seeing it is along the Blue Ridge Parkway near Wolf Mountain Overlook. Its dark purple, almost black, stems are quite distinctive. The species name, *maculatum*, means "spotted" and apparently some plants have spotted stems. However, the plants I've seen are WAY more than spotted!

Eutrochium maculatum has the following features:

- The dark purple or purple-spotted stem.
- The leaves have short petioles, are thick, sharp toothed, and in whorls of 4 to 5.
- The flowerhead is much smaller than that of *Eutrochium fistulosum*, and flat-topped with pale pink flowers. There are 9-22 florets per head, many more than the other *Eutrochium* species.



Spotted Joe-Pye-Weed (*Eutrochium maculatum*) Leaves & Stem



Spotted Joe-Pye-Weed (*Eutrochium maculatum*) Bloom

I finally worked out that my Joe is a Purple-node Joe-Pye-Weed (*Eutrochium purpureum*). *Purpureum* means “purple” which I find confusing because most of the stem is green, not purple. I need to force myself to remember that the Joe-Pye with the purple stem is *maculatum* and not *purpureum*! However, many *Eutrochium purpureum* have a purple band at the node where the leaves intersect the stem.

Eutrochium purpureum has the following features:

- The stem is green, usually with a purple band at the nodes.
- The leaves are petioled .(often purple-colored), sharp toothed, and in whorls of 3 to 6. However, as you can see in the picture below there are 7 leaves, so plants don’t always follow all the rules.
- The domed flowerhead contains 4-7 pale pink florets per head.



Purple-node Joe-Pye-Weed (*Eutrochium purpureum*) Leaves & Stem



Purple-node Joe-Pye-Weed (*Eutrochium purpureum*) Bloom

Appalachian Joe-Pye-Weed, Steele's Joe-Pye-Weed (*Eutrochium steelei*) was first described in 1990. Prior to that it may have been misidentified as *Eutrochium purpureum*. Weakley describes it as being uncommon in the Southern Appalachian Mountains.

Eutrochium steelei has the following features:

- The solid stem is green with numerous gland-tipped hairs. This is something we should be able to easily spot!
- There are 3-4 broad leaves in the whorl.
- The leaf undersides have gland-tipped hairs.
- The flowerhead is rounded with 4-7 pink florets per head.

Finally, in case you were wondering, Joe-Pye-Weed is thought to be named after a Mohican sachem or chief named Shauquethqueat who lived in the late 1700s in Stockbridge, New York, which is located between Utica and Syracuse. He adopted the name Joe Pye and somehow that name became attached to *Eutrochium* plants. Possibly he used them for healing or grew the plants near his home. A versatile plant, *Eutrochium maculatum* has been used in folk medicine to treat gall and kidney stones (one of its common names is Gravel Root), urinary tract infections, impotence, arthritis-like pain, gout, bedwetting, congestive heart failure, and fever.

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SHORTIA

A quarterly publication of the Western Carolina Botanical Club
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Vol. XXXV Vol. 3

Editor: Ken Borgfeldt

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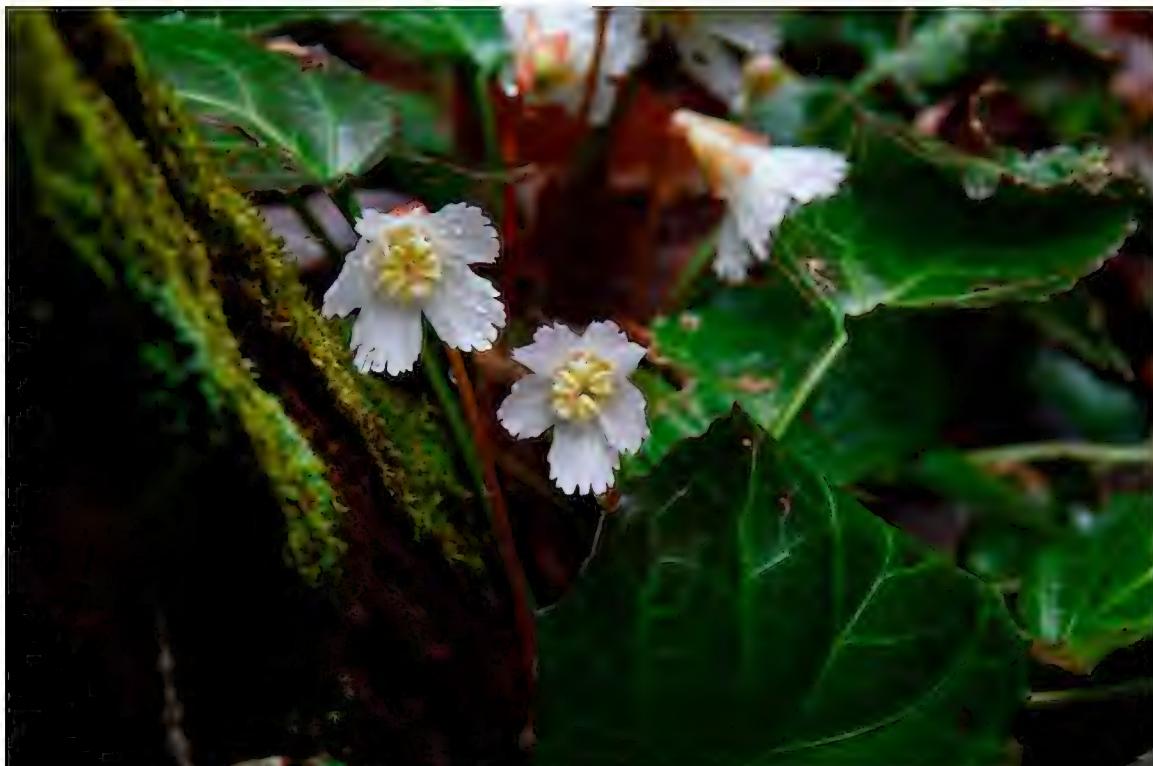
2023

The mission of the Club is to identify and study native plants and their habitats and to advocate the protection of biodiversity in our natural world. Membership is open to all. Individual/family memberships are \$15/year. Lifetime membership is \$150. Send [completed membership form](#) and dues to Western Carolina Botanical Club, 232 Frazier Road, Brevard, NC 28712

SHORTIA

NEWSLETTER OF THE

WESTERN CAROLINA BOTANICAL CLUB



Shortia galacifolia

Oconee Bells

Winter 2023

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MEMBER NEWS

Field Trip Cancellations: Occasionally, field trips must be canceled or changed either for weather conditions or other reasons such as road closings. Such changes are sent out by email to all members by 7 AM the day of the field trip. If you do not have email access, please call the leader, co-leader, or recorder (whose phone numbers are listed on the schedule) to be sure that the walk is going to go as planned. Indoor programs are canceled when Henderson County Schools are closed (see <http://www.hendersoncountypublicschoolsnc.org>) but NOT necessarily canceled because of the delayed opening.

For any change of address, email or telephone number, please send an email to wcbotanicalclub@gmail.com.

Our webpage is located at <http://wcbotanicalclub.org>



President's Message

Cindy Carpenter

Happy 2024! Spring is my favorite season, but here in western North Carolina I find myself appreciating winter more and more. The house, though cluttered with porch plants, is brighter than in summertime and certainly more than in fall when the sun's arc gets lower and lower. This time of year leafless trees invite us to appreciate their architecture as we stretch our eyes to views between and beyond them. Little evergreen basal rosettes, mosses, and dried herbaceous perennials catch the eye.

Although plenty of shivery days lie ahead when rhododendron leaves roll tight, our point on this pretty planet increasingly tilts toward the sun and longer light. We in the Western Carolina Botanical Club can warm up to the New Year enjoying Penny's weekly posts and perusing our excellent website and archived *Shortia* issues that tune us into our flora at our leisure. And our lineup of indoor programs is about to begin.

For over 20 years the WCBC has been a partner to Bullington Gardens in Hendersonville where we hold our winter programs. The Bullington Bunch created and continue to maintain the native woodland garden there and over the years contributed to the Gardens' education mission. The Club gives an annual donation for usage of their facility for our meetings and to support their mission. At this past November's board meeting a long time WCBC member proposed that we support the Botanical Gardens at Asheville beyond our annual group membership. Before Bullington was developed the Club had an active relationship with the BGA, sponsoring work days and offering annual field trips. Since the mission of the BGA closely aligns with ours, both focusing on the study and preservation of native plants, your board agreed to an annual donation to the BGA in addition to continuing to support Bullington. Here are links to both sites:
<https://ashevillebotanicalgardens.org/> ; <https://www.bullingtongardens.org/>.

I hope to see you at our winter meetings at Bullington! Spring is coming!



Calling all new WCBC members:

Aleta Tisdale, Scheduler

Have you ever wanted to lead a WCBC walk but felt you weren't sure what to do? Have you wondered what being the recorder entails?

Well, it's not that hard, believe me! And it really is quite fun.

The fact is that our supply of experienced leaders and recorders has diminished of late for a variety of reasons. So, we

need to train up a fresh crop!



Regarding the Leader role, think about trying the Co-leader role first with an experienced Leader. It's a great way to learn the ropes, learn a trail and get to know a new botany buddy.

As for the Recorder role, well, all you need to do is come on the walk armed with a checklist and a pencil -- the other members will let you know what they find. You just mark it down. It's a great way to learn the names of more plants. Then you mail the list to Ken, and he adds it to the database. And you are part of our history!

The trip Leader may decide to scout ahead of time. In that case you will have an even better chance to learn the plant names and the trail and spend even more time outside in our beautiful area.

So, think about stepping up to the plate and co-leading or recording a botany walk in

2024.

You will love it!

Editor's Note:

A field trip scheduling party will be held at Bullington Gardens on Friday, March 1st, 10AM – 12PM. Come for the coffee and cake – make suggestions and then choose your walks”



A Year's Botanizing on the Sam Knob Meadow Trail

by Ken Borgfeldt, Daudie & John Colson, Penny Longhurst, and Aleta Tisdale



After a rewarding field trip to Sam Knob Meadow in September 2022, we decided that we would like to carry out a phenological study and lead walks there monthly, like our Frying Pan walks in 2022. We scheduled walks for the first or second Monday of each month, between May and October 2023. The highlights of our visits are below:

The first walk was scheduled for May 6, 2023. Daudie, John, and Penny scouted on May 3rd, a miserably cold and windy day. Clearly the plants thought so too since there was very little to be seen. Not even many leaves! We identified 41 shivering species with 14 in bloom. Noteworthy plants in bloom were Allegheny Serviceberry (*Amelanchier laevis*), Thyme-leaved Bluets (*Houstonia serpyllifolia*), Wood Betony (*Pedicularis canadensis*), and Hobble Bush (*Viburnum lantanoides*). We decided that May was probably too early to visit the meadow. As a result, the field trip was changed to the Blue Ridge Parkway Ridgeline Trail, which had many more blooming plants.

For our second scheduled walk on June 5, we had 11 participants. The day was sunny and mild, a welcome change from the previous visit. Our timing was perfect. We identified 88 plants and 35 in bloom. Noteworthy plants included masses of Mountain Maple (*Acer spicatum*) in bloom. Also Red Chokeberry (*Aronia arbutifolia*), Bluebead Lily (*Clintonia borealis*), Minnie Bush (*Menziesia pilosa*), Catawba Rhododendron (*Rhododendron catawbiense*), and Carolina Azalea (*Rhododendron minus var. minus*). Alternate-leaved Dogwood (*Cornus alternifolia*) was coming. Mountain Wood Sorrel (*Oxalis montana*) had not previously been recorded at Sam Knob and was in bloom. The Interrupted Ferns (*Osmunda claytoniana*) in the meadow all had spore-bearing structures. There was no sign of our usual meadow favorites, Hoary Skullcap (*Scutellaria incana var. punctata*) or Hairy Bush Pea (*Thermopsis villosa*), although some Dense Blazing Star (*Liatris spicata*) and Fireweed (*Chamerion angustifolium ssp. Circumvagum*) leaves were emerging. We decided that the first week of June was a great time for seeing spring wildflowers and shrubs in bloom. Pictures [can be seen here](#).

We had 12 participants for our third visit on July 10. It was a perfect day for a field trip. The sky was partly cloudy. Therefore, it was warm but not too hot. We identified 85 species with 29 blooming. The Fireweed and Hairy Bush Pea were blooming, but the Hairy Wood Sunflower (*Helianthus atrorubens*), Hoary Skullcap and Dense Blazing Star were not quite ready. Special plants that were found blooming were Green Adder's Mouth (*Malaxis unifolia*), Kidney-leaved Twayblade (*Neottia smallii*), and Large Cranberry (*Vaccinium macrocarpon*). In short, an excellent day, especially for seeing the Fireweed and orchids. Pictures [can be seen here](#). July is the perfect time for catching the Fireweed in bloom.

For our fourth walk on August 7, we had 10 participants, including 2 new members on their first field trip. The day was cloudy and breezy enough to make picture-taking difficult. We identified 104 species with 50 blooming. Plants of note included the two orchids, Green Adder's Mouth and Kidney-leaved Twayblade, Fireweed, and Hairy Bush Pea which

were still blooming and, finally, so were the Star Tickseed (*Coreopsis pubescens*), Hoary Skullcap, and Dense Blazing Star, putting on quite a show. The large patch of Lance-leaf Loosestrife (*Lysimachia lanceolata*) was in full bloom and worth the extra walk. The Hairy Wood Sunflower was still coming. Red Chokeberry, Bluebead Lily, Hobble Bush, and Large Cranberry were in fruit. Blueberries and Blackberries were ripe and ready for eating! Fortunately, we managed to get back to the cars before the typical afternoon thunderstorm struck. Pictures [can be seen here](#).

For our September 11th walk we had 9 participants and found 94 species with 39 in bloom. This was the perfect time to see Star Tickseed, Hoary Skullcap, Stiff Gentian (*Gentianella quinquefolia*), and Hairy Wood Sunflower blooming. Masses of different Asters and Goldenrods were also blooming. The Wild Raisin (*Viburnum nudum var. cassinoides*) had lovely colorful fruit. Pictures [can be seen here](#).

On our final walk on October 13th, we had 10 participants. The day was bright and sunny, but a bit windy. Some of the leaves had already begun to change color. A total of 72 species were identified with 16 in bloom. Most of the plants had already gone to seed, but a few Asters were still hanging on. The Stiff Gentians were abundant and blooming. Mountain Holly (*Ilex opaca*) and American Mountain Ash (*Sorbus americana*) both had beautiful red berries. October is a great time to see fall colors and the Gentians. Pictures [can be seen here](#).

So, now the important question is, where shall we go in 2024!



Deciduous Hollies of the Western Carolina Mountains or the Perils of Confusing Pedicels with Peduncles

Lucy Prim

Last May, when we were doing our Botany Club walk along Upper Holmes Loop, Ken found a flowering deciduous holly that all the rest of us had walked right by and hadn't noticed. When we got home and saw his pictures, it led to a flurry of email exchanges with Joe discussing which deciduous holly it might be. Was it *Ilex montana*? Or was it *Ilex verticillata*? Both these hollies are common in our area, but we'd never actually identified *Ilex verticillata* before. It wasn't in our database. If it was so common, why wasn't it in our database?

I was intrigued with the possibility that this was *Ilex verticillata*. I was focusing in on the longish pedicels on the staminate flowers, which seemed to match the description in Weakley's key. But, as Joe noted, "peduncles" and "pedicels" are slightly different. If I hadn't made the mistake of thinking those two terms meant the same thing, I wouldn't have gone so blithely down the *I. verticillata* rabbit hole!

Penny and I decided to go back to the site of Ken's holly and take some more pictures and have a closer look. We walked through the woods until we got to the place Ken had seen the plant. At first we couldn't find it. We slowly walked back and forth along the trail, peering into the bushes, looking for that holly. I began to wonder if Ken was fooling us and had sent us on a wild goose chase! But then, Penny found it! We were delighted, and we took lots of pictures. Back at home we compared Ken's holly to the descriptions in Weakley's Flora.

At that point I was still getting confused between "peduncles" and "pedicels". But Joe, with his brain like a heat seeking rocket, zeroed in on that mistake, and also pointed out that *I. verticillata* grows near water, and Ken's holly was not near water, but up on a hillside. That made us think it was most likely *Ilex montana*. But was it?

Now it is six months after all that, and looking back through our emails and pictures and Weakley's key I am beginning to feel that headache coming on again, which I so often get when trying to use Weakley's key with all the words I need to look up to make sense of it. But the "NameThatPlant.net" website makes this identification seem less daunting, with its nice pictures and easily understood captions. I noticed on that website that one more deciduous holly lives in our area, *Ilex ambigua*. Could Ken's holly be that?

There are pictures of *Ilex ambigua* taken by Patrick McMillan, labeled as growing at Pearson's Falls, and blooming exactly like Ken's holly, in big clusters, in May, just the time we saw it blooming at Holmes which isn't that far away. The leaves are similar, with no long-attenuated tips, which according to Weakley's key is the main difference between *Ilex montana* and *Ilex ambigua*.

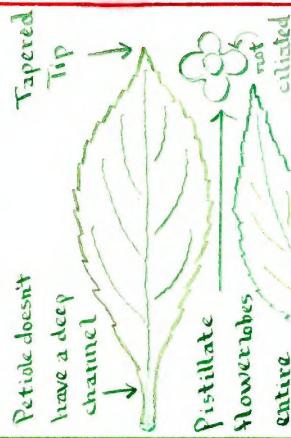
I am still undecided about Ken's holly. For me it remains a mystery, and it's quite nice to have a mystery to ponder, at least it is before the Weakley's key-induced headache kicks in.

The main conclusion I've come to with all this is that we need to remember there are three common deciduous hollies that we have here in our mountains, and when we find a deciduous holly out in the woods we can carefully consider which one it is. It pays to take lots of good pictures, look at pistillate flowers with a magnifying glass for ciliated lobes, look at leaf tips, look at petioles with a magnifying glass for channels and hairs, do not jump to hasty conclusions, and above all—don't get confused between "pedicels" and "peduncles"!

Deciduous Hollies of the Western Carolina Mountains

Ilex verticillata Common Winterberry

Common in bogs, wet locations throughout Carolinas



Fruit 5-9 mm on short pedicels up to 6 mm
5-9 mm diameter
Nutlets smooth on back

Lucy Reiter

Ilex montana Mountain Holly

Common in mountains



Fruit 5-8 mm on
short pedicels up to 6 mm

Ilex ambigua

Dry forests, Photograped at Pearson's Falls



Petiole has a channel with dark
irregularities
Fruit 5-9 mm across
on short pedicels

Ilex collina Longstalk Holly

Rare endemic, high elevation streams and rocky slopes, moist forests, one of the rarest shrubs in N. Carolina.



Lucy Reiter

Missing Plants – Showy Lady's Slipper (*Cypripedium reginae*)

Penny Longhurst

If you've ever had the thrill of spotting a Showy Lady's Slipper (*Cypripedium reginae*) in bloom, I bet like me, you stood there totally amazed. When I was in Newfoundland in July 2017, it seemed like every bog had several of these beautiful plants blooming, often accompanied by another water-loving plant, Purple Pitcher Plant (*Sarracenia purpurea*).



Cypripedium reginae is attributed to the South Carolina botanist, Thomas Walter, who described the plant in his 1788 "Flora Caroliniana". The genus name, *Cypripedium*, is derived from the Greek and translates to "Venus or Aphrodite's shoe". The lip or pouch of the flower is slipper-shaped, thus the genus's common name, Lady's Slipper. The species name, *reginae*, means "regal" or "queenly". *Cypripedium reginae* is the largest of the Lady's Slipper orchids, potentially growing to 2.5 feet tall. Its habitat differs from that of the other Lady's Slippers – it prefers damp alkaline soils and is generally found in fens or boggy areas. It has several leaves along its hairy stem and may have more than one flower. The flowers are large, sometimes over 3 inches, with white sepals and upper petal. The lower petal or pouch is pink-purple and sometimes striped. The staminode inside the pouch is white with a yellowish tinge at the tip.



Cypripedium reginae is listed in our database but the club has never seen it on our field trips. As I explained previously, the initial plants included in the database came from Dick Smith's "Wildflowers of the Southern Mountains" book. Dick describes the plant and has a photograph, but we have no way of knowing where his photograph was taken. According to Weakley, although rare, the plant has been found in states in the Appalachian Mountains from Virginia northward. However, according to the USDA, it is most likely to be seen in those that border Canada. Historically single plants have

been reported to have been found in Jackson County and Macon County, but the provenance of these sightings is considered suspect.

Sadly, our chances of spotting *Cypripedium reginae* in North Carolina are pretty much non-existent! However, if you travel to Eastern Canada, especially Newfoundland, keep your eyes peeled and you might just get lucky. Another bucket-list plant.

Acknowledgements:

Thanks to Ken Borgfeldt, Master Recorder, for database information and to Howard Colby for the use of his photographs, which were better than mine!

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A quarterly publication of the Western Carolina Botanical Club
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Vol. XXXV Vol. 4

Editor: Ken Borgfeldt
4Q2023

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